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United States
Department of
Agriculture

Food and
Nutrition
Service

24500

Child Nutrition Labeling for Seafood Products

A / A

[prepared by Nutrition and Food Service
Service Division, Food and Nutrition Service]

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Seafood

Prepared by
Nutrition and Technical Services Division
Food and Nutrition Service

The following persons had major responsibility for this publication:

Cheryl Wade
Linda Singletary
Kathy Molino

Acknowledgment and thanks to the following persons who helped prepare this publication:

Margie Livingston
Christine Clay
Don Maher
Rita Creitz
Joyce Hawkins
Mary Daniels

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April 1984

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U.S. DEPT. OF COMMERCE
NATIONAL ARCHIVES
FEDERAL BUREAU OF INVESTIGATION

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Introduction

This publication has been prepared for seafood product manufacturers. It contains instructions on how to apply for and obtain approval of a label with a Child Nutrition (CN) label statement. It also gives directions for calculating the contribution that seafood products make toward meeting meal pattern requirements for the Child Nutrition Programs. These procedures supersede all other instructions, written or oral, that the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA) may have given.

Inspection Requirement

The National Marine Fisheries, U.S. Department of Commerce (USDC) operates a voluntary inspection service. All CN labeled seafood products must be produced under this service.

CN Label Application Materials

What To Submit

- NOAA Form 89-819 with specifications
- Product label - five copies
- Alternate food products (e.g., vegetable protein products) information
- Samples (upon request by FNS)

NOAA Form 89-819

Complete all portions of this form, and submit the form with five copies of the specifications. Give the following information for each product:

- Qualitative and quantitative formulation(s)
- Raw weights of ingredients and portion, and precooked weights of the components (fish, cheese, breading, etc.) and portion
- Processing procedures (all steps for processing including temperature and time)
- Listing of ingredients on labels in order of predominance by weight
- A description of the seafood so that it matches a food item in the Food Buying Guide for Child Nutrition Programs (FBG), PA-1331, January 1984, such as "fish portions (frozen, unbreaded)"

- When claiming bread credit for battered and/or breaded products, submit the following information:

a) Percentage breakdown of the whole-grain or enriched flour or meal in the batter/breader

b) Percentage breakdown of added water or other liquid used in the batter/breader

Product Label

For sketch approval, submit a legible draft of the label as it will appear on the package. Submit five copies.

For final approval, submit the label exactly as it will appear on the package. Submit five copies.

The following information must be printed on the product label:

- Federal inspection legend and establishment number
- Net weight or piece count
- Name and address of manufacturer or distributor
- Ingredient statement
- CN label statement which must be an integral part of the product label and must include:
 - Logo
 - Product identification number (assigned by FNS)
 - Statement of credit
 - Authorization statement
 - Approval date (the month and year the label is approved final)

The statement of credit identifies the contribution of a specific portion of a seafood product toward the meat/meat alternate, bread/bread alternate, and/or vegetable/fruit component of the meal pattern requirements. The following criteria apply:

- A product serving must provide a minimum of 0.50 ounce equivalent meat/meat alternate. Ounce equivalents should

be expressed as a decimal in increments of 0.25 ounce, such as, 0.50, 0.75, 1.00, etc., ounce equivalent meat/meat alternate.

- To receive bread/bread alternate credit, a product serving must provide a minimum of 1/4 serving. Larger servings must be expressed in increments of 1/4 serving of bread/bread alternate.
- To receive vegetable/fruit credit, a product must provide a minimum of 1/8 cup serving. Larger servings must be expressed as a fraction in increments of 1/8 cup serving. Since only a very limited number of seafood products may provide vegetable/fruit credit, the calculations and yield data for the vegetable/fruit component are not given in this publication but are available upon request from FNS.

The CN statement must accurately reflect the product. For example:

- A product with only seafood would state "provides ____ oz equivalent meat."
- A product with seafood and a meat alternate would state "provides ____ oz equivalent meat/meat alternate."

Alternate Food Products Information

Vegetable protein products (vpp), cheese alternate products, and enriched macaroni with fortified protein, when made and used according to USDA regulations, may be used to meet part of the meat/meat alternate component.

Attach one photo copy or facsimile of the label of each alternate food product that will be credited toward the meal pattern requirements. Write the manufacturer's name, product name, and identification number on all five copies of the specifications. If a seafood product contains vpp which is to be credited toward the meal pattern requirements, include a letter from the vpp manufacturer specifying the percent protein in the vpp unless this information is on the label. Additional information on alternate food products is available from FNS.

FNS may request a sample of the product as part of the review process. If a sample is requested, FNS may delay final label approval until it receives and reviews the sample. Label applications must pertain to products that have been made and tested in a pilot plant or on an assembly line.

Where to
Submit

Submit all label applications to:

Approving Officer
National Seafood Quality and Inspection Laboratory
National Marine Fisheries Service
P.O. Drawer 1207
Pascagoula, Mississippi 39567
or call (601) 762-1892

Procedures for Reviewing CN Labels

Queuing System

The USDC Approving Officer reviews the label application and then forwards it to FNS. When FNS receives the application, FNS dates it and places it in a queuing system. FNS reviews each label in turn based on the date received. FNS will not grant exceptions to the queuing system except in extreme emergencies. The review time in FNS will be approximately 1 week; however, this will vary depending on the volume of labels. In addition, label approval for products that are complex may take longer. After FNS approves a label, FNS returns it to the USDC Approving Officer who in turn notifies the company.

Identification
Numbering
System

An automated data system will be used to assign a six-digit identification number to all labels. Using this system, FNS keeps track of label approvals and provides this information to regional, State, and local Child Nutrition Program staff. FNS will also use this data to notify manufacturers when a new regulation requires them to resubmit labels. When a label is submitted in sketch, FNS assigns the identification number when it is received. When a label is submitted in final without prior sketch approval, manufacturers must call FNS for an identification number before printing the label. Each final label application will receive a new identification number.

Label
Applications
Returned

Label applications that are incorrect, illegible, or lacking appropriate information will be returned to the Approving Officer, with notations of the errors. FNS will keep one copy of every label application submitted for review. Labels that are resubmitted for review will be placed in the queuing system based on the date of resubmittal.

Label
Applications
Resubmitted

Resubmit labels with a CN statement when there are:

- changes in the product formulation or wording

- changes in the label (e.g., ingredient statement, product name, CN label statement changes, etc.)
- changes in policies, regulations, or crediting standards.

Where to Direct
Questions On CN
Labeling

If you need further information or answers to questions
please write to:

U.S. Department of Agriculture
Nutrition and Technical Services Division
Food and Nutrition Service
3101 Park Center Drive, Room 602
Alexandria, Virginia 22302
or call (703) 756-3556

How to Determine Ounce Equivalent Meat/Meat Alternate

The unit of measure for the meat/meat alternate component is "ounce equivalent." To be CN labeled, a serving of a product must provide a minimum of 0.50 ounce equivalent meat/meat alternate and credit must be expressed in 0.25 ounce increments. Any of the following can contribute to the meat/meat alternate component of the Child Nutrition meal pattern requirements: lean meat, poultry, seafood, cheese, eggs, cooked dry beans and peas, peanut butter, cottage cheese, or any of these combinations. Alternate food products, which include vpp, cheese alternate products, and enriched macaroni with fortified protein, when made and used according to USDA regulations, may also be used to meet part of the meat/meat alternate component. Additional information on alternate food products is available from FNS.

These four steps for determining the total ounces of equivalent meat/meat alternate in a serving of a product are:

- Step 1. Determine which allowable meat/meat alternates are used in the product being labeled.
- Step 2. Calculate the ounce equivalent meat/meat alternate contributed by each category. Procedures are on the following pages.
- Step 3. Total the ounce equivalent meat/meat alternate calculated under each category.
- Step 4. Round down to the nearest 0.25 ounce equivalent meat/meat alternate.

SEAFOOD CALCULATIONS

1. Multiply the raw portion size by the percent raw seafood:
$$\text{oz raw portion} \times \% \text{ raw seafood} = \text{oz raw seafood/portion}$$
2. Multiply the ounces of raw seafood per portion by the cooking yield in the FBG:

$$\text{oz raw seafood/portion} \times \text{FBG cooking yield} = \text{oz equivalent meat/portion}$$

SEAFOOD AND VPP CALCULATIONS

1. Determine the ratio of vpp to liquid (allowed for full hydration) by using the following formula:

$$\text{a. } \frac{\% \text{ protein in vpp as purchased}}{18\% \text{ minimum protein}} = \frac{\text{total parts hydrated}}{\text{product}}$$

$$\text{b. Total parts hydrated product} \text{ minus } 1 \text{ part vpp} = \text{parts liquid for full hydration}$$

2. Multiply the percent vpp in the formula by the parts liquid for hydration:

$$\% \text{ vpp} \times \frac{\text{parts liquid}}{\text{for hydration}} = \frac{\text{total percentage of liquid}}{\text{allowed for full hydration}}$$

3. Determine the total percentage of raw seafood mixture that can be credited by adding the following:

$$\% \text{ raw seafood} + \% \text{ dry vpp} + \% \text{ allowable liquid} = \% \text{ raw seafood mixture}$$

4. Check the percentage of fully hydrated vpp replacing the seafood (vpp replacement in excess of 30 percent will not be credited toward the meal pattern requirements):

$$\frac{\% \text{ vpp} + \% \text{ allowable liquid}}{\% \text{ seafood mixture}} \times 100 = \% \text{ hydrated vpp}$$

5. Multiply the raw portion size by the percent raw seafood mixture:

$$\text{oz raw portion} \times \frac{\% \text{ raw seafood}}{\text{mixture}} = \frac{\text{oz raw seafood}}{\text{mixture/portion}}$$

6. Multiply the ounces of raw seafood mixture per portion by the cooking yield in the FBG:

$$\frac{\text{oz raw seafood}}{\text{mixture/portion}} \times \frac{\text{FBG cooking}}{\text{yield}} = \frac{\text{oz equivalent meat}}{\text{alternate/portion}}$$

CHEESE/CHEESE ALTERNATES CALCULATIONS

Multiply the raw portion size by the percent cheese (or cheese mixture)¹ to determine the ounces of cheese or cheese mixture per portion.

$$\begin{array}{rcl} \text{oz raw portion} & \times & \% \text{ cheese or cheese} \\ & & \text{mixture} \end{array} = \begin{array}{l} \text{oz cheese/portion} \\ \text{or equivalent meat} \\ \text{alternate/portion} \end{array}$$

NOTE: Cheese and FNS approved cheese alternate products are calculated based on a 100-percent yield. Cottage cheese, ricotta cheese, and cheese foods are calculated based on a 50-percent yield.

Selected Yield Information for Seafood

Food	Yield
Crab meat (fresh or frozen)	97%
Fish Fillets (fresh or frozen)	70%
Fish Portions, Frozen, Unbreaded	78%
Minced Clams (raw)	66%
Minced Clams (cooked)	90%
Minced Fish	75%
Minced Shrimp (raw)	58%
Shrimp	
Cooked, peeled, and cleaned	
Fresh	100%
Frozen	83%
Peeled and Cleaned	
Frozen	62%

¹Cheese mixture is a combination of cheese and cheese alternate.

How to Determine Servings of Bread/Bread Alternates

The unit of measure for the bread/bread alternate component is "serving." The product must provide a minimum of 1/4 serving, and credit must be expressed in 1/4 serving increments to state bread credit on the CN label.

A product must meet the following criteria to be counted as a bread/bread alternate in the Child Nutrition Programs:

- 1) The product must be served as an accompaniment to or an integral part of the main dish of the meal.
- 2) Whole-grain or enriched flour or meal must be the primary ingredient by weight.

Bread items are categorized into four groups. They are as follows:

Group A - Breads, Rolls, and Quick Breads

Examples:	Bagels	Pizza Crust
	Rolls	Corn Bread

Group B - Crackers and Low Moisture Breads

Examples:	Dry Bread Sticks	Taco Shells
	Batters & Breaders	Melba Toast

Group C - Miscellaneous Items

Examples:	Pancakes	Waffles
	Meat/Meat Alternate	Tortillas
	Turnover Crust	

Group D - Pasta, Cereal Grains, and Breakfast Cereals

Examples:	Ravioli	Macaroni
	Lasagna Noodles	Spaghetti

The three steps for determining the total number of bread/bread alternate servings in a product are:

Step 1.

Find the group that applies to your product.

Step 2.

Determine the number of bread/bread alternate servings by dividing the ounces of bread/bread alternate in the fill

specifications by the weight of a bread/bread alternate serving (in ounces). Consult the following chart or section 3 of the FBG for each group of bread/bread alternate. For example, one serving of batter/breader equals 0.7 ounces.

$$\frac{\text{oz bread/bread alternate}}{\text{weight/serving (oz)}} = \text{servings bread/bread alternate}$$

Step 3.

Round down to the nearest 1/4 serving.

The breakdown of servings by weight are as follows:

SERVING	GROUP A		GROUP B		GROUP C		GROUP D	
	grams	oz	grams	oz	grams	oz	cups cooked	oz dry
1/4	7	0.2	5	0.2	8	0.3	1/8	0.2
1/2	13	0.5	10	0.4	15	0.5	1/4	0.5
3/4	19	0.7	15	0.5	22	0.8	3/8	0.7
1	25	0.9	20	0.7	30	1.1	1/2	0.9
1-1/4	31	1.1	25	0.9	38	1.3	5/8	1.1
1-1/2	38	1.3	30	1.1	45	1.6	3/4	1.3
1-3/4	44	1.6	35	1.2	52	1.8	7/8	1.6
2	50	1.8	40	1.4	60	2.1	1	1.8

Sample CN Label Statements

Precooked Breaded Fish Portions

CN One 3.00 oz fried breaded fish portion provides 1.50
oz equivalent meat for Child Nutrition Meal Pattern
Requirements. (Use of this logo and statement
authorized by the Food and Nutrition Service, USDA
08-84.) CN

Seafood Pattie with Vegetable Protein Product

CN One 4.00 oz seafood pattie with vegetable protein product
provides 2.00 oz equivalent meat/meat alternate for
Child Nutrition Meal Pattern Requirements. (Use of
this logo and statement authorized by the Food and
Nutrition Service, USDA 01-84.) CN

Precooked Fish Sticks

CN Two 1.00 oz fried breaded fish sticks provide 1.00 oz
equivalent meat for Child Nutrition Meal Pattern
Requirements. (Use of this logo and statement
authorized by the Food and Nutrition Service, USDA
05-84.) CN

Fish and Cheese Portions

CN One 3.60 oz fried breaded fish portion with cheese
*[containing 1.60 oz equivalent meat and 0.40 oz cheese]
provides 2.00 oz equivalent meat/meat alternate for
Child Nutrition Meal Pattern Requirements. (Use
of this logo and statement authorized by the Food
and Nutrition Service, USDA 05-84.) CN

*NOTE: Information in BRACKETS [] is optional.

Sample CN Label Submittals

RECOMMENDED USDC/USDA (FNS) FORMAT FOR
APPLICATION FOR APPROVAL OF SEAFOOD PRODUCT
SPECIFICATIONS AND LABELS CARRYING CHILD
NUTRITION (CN) LABEL STATEMENTS

1. Product Name: Combination Seafood Patty - 3.0 oz Portion

2. This Label is (a) New X

(b) Supersedes*

(c) Extends/Revises*

Label with Prior Approval, Date _____

*If (b) or (c), give date of approval.

3. Action Requested by USDC/USDA (FNS):

X Final Approval _____ Sketch Approval

4. Name and Address of Firm and/or Distributor(s)

5. Fill Specification: List all major components to two decimal places. Do not use fractions.

Listed By: Weight: X Percent: _____

SEAFOOD: (raw, - minced, whiting, clams, and crab-meat)	2.01
Non-Seafood Components	0.48
Batter (with water)	0.30
Breading	0.21
TOTAL	3.00
(If percent is used, total must equal 100%)	

6. Complete Formula: List by order of predominance. List all ingredients to three decimal places. Do not use fractions.

Listed By: Weight: _____ Percent: X

SEAFOOD: Minced Whiting	62.000
Minced Clams	3.800
Crab Meat	1.200
Non-Seafood Component - (potatoes, onions, chicken broth, modified corn starch, salt, pepper, sugar, sodium tripolyphosphate)	16.000
Batter (water, wheat flour, modified corn starch)	10.000
Breading (wheat flour, dextrose, salt)	7.000
TOTAL	100.000

COMBINATION SEAFOOD PATTY

Meat/Meat Alternate Component

Step 1. Determine which category(ies) of meat/meat alternate(s) is used in the product.

Step 2. Calculate the ounce equivalent meat/meat alternate contributed by each category.

Seafood Patty: 62% minced whiting, 3.8% canned clams, and 1.2% crabmeat.

Minced Whiting

1. Determine the ounces minced whiting per portion by multiplying the ounces raw portion by the percent of minced whiting:

oz raw portion x % minced whiting = oz minced whiting

3.00 oz x 0.62 = 1.86 oz minced whiting

2. Multiply the ounces minced whiting by the cooking yield in the FBG: [mechanically deboned fish (minced) - 75 percent yield]

oz minced whiting x FBG cooking yield = oz equivalent
meat

1.86 oz x 0.75 = 1.395 oz equivalent meat

Canned Clams

1. Determine the ounces canned clams per portion by multiplying the ounces raw portion by the percent of canned clams:

oz raw portion x % canned clams = oz canned clams

3.00 oz x 0.038 = 0.114 oz canned clams

2. Multiply the ounces canned clams by the cooking yield in the FBG: [canned clams (drained) - 90 percent yield]

oz canned clams x FBG cooking yield = oz equivalent
meat

$$0.114 \text{ oz} \times 0.90 = 0.1026 \text{ oz equivalent meat}$$

Crab Meat

1. Determine the ounces of crab meat per portion by multiplying the ounces raw portion by the percent of crab meat:

$$\text{oz raw portion} \times \% \text{ crab meat} = \text{oz crab meat}$$

$$3.00 \text{ oz} \times 0.012 = 0.036 \text{ oz crab meat}$$

2. Multiply the ounces of crab meat by the cooking yield in the FBG: [crab meat - 97 percent yield]

$$\text{oz crab meat} \times \text{FBG cooking yield} = \text{oz equivalent meat}$$

$$0.036 \times 0.97 = 0.03492 \text{ oz equivalent meat}$$

Step 3.

Total the ounces equivalent meat calculated under each category:

Minced Whiting	1.39500
Canned Clams	0.10260
Crab Meat	0.03492
	<u>1.53252</u> oz equivalent meat

Step 4.

Round down to the nearest 0.25 ounce equivalent meat. This product provides 1.5 ounce equivalent meat.

Sample CN statement

CN		000001
Fishworld's 3.00 oz Combination Seafood Patty provides 1.50 oz equivalent meat for the Child		
CN	Nutrition Meal Pattern Requirements. (Use of this logo and statement authorized by the Food and Nutrition Service, USDA 06-84).	CN
CN		

RECOMMENDED USDC/USDA (FNS) FORMAT FOR
APPLICATION FOR APPROVAL OF SEAFOOD PRODUCT
SPECIFICATIONS AND LABELS CARRYING CHILD
NUTRITION (CN) LABEL STATEMENTS

1. Product Name: Fish and Cheese Portion - 4.0 oz

2. This Label is (a) New X

(b) Supersedes*

(c) Extends/Revises*

Label with Prior Approval, Date _____

*If (b) or (c), give date of approval.

3. Action Requested by USDC/USDA (FNS):

X Final Approval _____ Sketch Approval

4. Name and Address of Firm and/or Distributor(s)

5. Fill Specification: List all major components to two decimal places. Do not use fractions.

Listed By: Weight: X Percent: _____

Cod (raw)	2.02
Batter (with water)	0.95
Breading	0.53
Cheese	0.50
TOTAL	4.00
(If percent is used, total must equal 100%)	

6. Complete Formula: List by order of predominance. List all ingredients to three decimal places. Do not use fractions.

Listed By: Weight: _____ Percent: X

Cod (raw)	50.500
Breading - Enriched bleached wheat flour, (niacin, reduced iron, thiamine mononitrate, riboflavin), yellow corn flour, sugar, whey, dextrose, (Enriched bleached wheat flour and yellow corn flour - 91%)	13.300
Cheese - Pasteurized Processed American Cheese	12.500
Water (used in batter)	12.200
Batter - Enriched bleached wheat flour, (niacin, reduced iron, thiamine mononitrate, riboflavin), yellow corn flour, modified food starch, whey, non-fat dry milk, salt, leavening, eggs, (Enriched bleached wheat flour and yellow corn flour - 84%)	11.500
TOTAL	100.000

BREADED FISH AND CHEESE PORTION

Meat/Meat Alternate Component

Step 1. Determine which category(ies) of meat/meat alternate(s) is used in the product.

Step 2. Calculate the ounces equivalent meat/meat alternate contributed by each category.

Fish

1. Determine the ounces of cod per portion by multiplying the ounces raw portion by the percent cod:

$$\text{oz raw portion} \times \% \text{ raw cod} = \text{oz raw cod}$$

$$4.00 \text{ oz} \times 0.505 = 2.02 \text{ oz raw cod}$$

2. Determine the ounces equivalent meat by multiplying ounces of raw cod by the cooking yield in the FBG: [fish portions, frozen, unbreaded - 78 percent yield]

$$\text{oz raw cod} \times \text{FBG cooking yield} = \text{oz equivalent meat/portion}$$

$$2.02 \text{ oz} \times 0.78 = 1.5756 \text{ oz equivalent meat/portion}$$

Cheese

Determine the ounces of cheese per portion by multiplying the ounces raw portion by the percent cheese:

$$\text{oz raw portion} \times \% \text{ cheese} = \text{oz cheese/portion or equivalent meat alternate/portion}$$

$$4.00 \text{ oz} \times 0.125 = 0.50 \text{ oz cheese/portion or equivalent meat alternate/portion}$$

NOTE: Process American cheese has a 100 percent yield.

Step 3. Total the ounces equivalent meat/meat alternate calculated under each category:

Fish	1.5756 oz
Cheese	0.5000 oz
	<hr/>
	2.0756 oz equivalent meat/meat alternate

Step 4.

Round down to the nearest 0.25 ounce equivalent meat/meat alternate. This product provides 2.0 ounce equivalent meat/meat alternate.

Bread/Bread Alternate (Batter and Breeding)

Step 1.

Determine the group of bread/bread alternate that applies to your product. In this case, batters/breaders are included under Group B - Crackers and Low Moisture Breads. One serving equals 0.7 ounces.

NOTE: In order to receive bread credit, the whole-grain or enriched flour or meal must be the primary ingredient by weight.

Determine whether the enriched wheat flour and corn flour combined are a greater percentage of the batter/breader than the water.

1. Multiply the percent of total breeding ingredients by the percent of enriched bleached wheat flour and yellow corn flour in the breeding:

$$13.3 \times 0.91 = 12.103 \text{ (percent of dry breeding that is enriched flour and corn flour)}$$

2. Multiply the percent of total dry batter ingredients by the percent of enriched bleached wheat flour and yellow corn flour in the dry batter:

$$11.5 \times 0.84 = 9.66 \text{ (percent of dry batter that is enriched flour and corn flour)}$$

3. Add the results of 1 and 2 above to see if the percent of enriched bleached wheat flour and yellow corn flour is greater than the percentage of water in the formula (percent of water in the formula is 12.2):

$$9.66 + 12.103 = 21.763$$

Step 2.

Determine the number of bread servings by dividing the ounces of batter/breeding in the fill specifications by the weight of a bread serving (in ounces). In this case, one serving equals 0.7 ounces.

$$\frac{\text{oz batter/breeding}}{\text{weight/serving (oz)}} = \text{servings bread alternate}$$

$$\frac{1.48 \text{ oz}}{0.7 \text{ oz}} = 2.11 \text{ servings bread alternate}$$

Step 3.

Round down the nearest 1/4 serving. This product provides 2.00 servings of bread alternate.

Sample CN statement

CN		000002
CN	Fishworld's 4.00 oz Fish and Cheese Portion *[containing 1.57 oz equivalent meat, 0.50 oz cheese, and 1.48 oz batter and breading] provides 2.00 oz equivalent meat/meat alternate and 2.00 servings of bread alternate for Child Nutrition Meal Pattern Requirements. (Use of this logo and statement authorized by the Food and Nutrition Service, USDA 10-84).	CN
CN		

* NOTE: Information within BRACKETS [] is optional.

RECOMMENDED USDC/USDA (FNS) FORMAT FOR
APPLICATION FOR APPROVAL OF SEAFOOD PRODUCT
SPECIFICATIONS AND LABELS CARRYING CHILD
NUTRITION (CN) LABEL STATEMENTS

1. Product Name: Breaded Shrimp Nuggets with Vegetable Protein Product

2. This Label is (a) New X

(b) Supersedes*

(c) Extends/Revises*

Label with Prior Approval, Date _____.

*If (b) or (c), give date of approval.

3. Action Requested by USDC/USDA (FNS):

 X Final Approval Sketch Approval

4. Name and Address of Firm and/or Distributor(s)

5. Fill Specification: List all major components to two decimal places. Do not use fractions.

Listed By: Weight: X Percent:

Shrimp (minced, raw)	0.26
Batter (with water)	0.19
Vpp (50% protein)	0.04
Salt	0.01
TOTAL	0.50
(If percent is used, total must equal 100%)	

6. Complete Formula: List by order of predominance. List all ingredients to three decimal places. Do not use fractions.

Listed By: Weight: _____ Percent: X

Shrimp (minced, raw)	52.000
*Batter (water, bleached wheat flour, salt, sugar)	37.600
Vegetable Protein Product (soy flour, niacinamide, zinc oxide, ferrous sulfate, vitamin A palmitate, calcium pantothenate, thiamin mononitrate, riboflavin, vitamin B ₁₂).	8.000
Salt	2.400
<hr/>	
TOTAL	100.000

*Bread credit is not given for this product. The flour is not enriched and water is the primary ingredient in the batter.

BREADED SHRIMP NUGGETS WITH VEGETABLE PROTEIN PRODUCT

Meat/Meat Alternate Component

Step 1. Determine which category(ies) of meat/meat alternate(s) is used in the product.

Step 2. Calculate the ounces equivalent meat/meat alternate contributed by each category.

Minced Shrimp And VPP

1. Check to make sure that the vpp has a label on the principal display panel of the package which contains the statement, "This product meets USDA/FNS requirements for use in meeting a portion of the meat/meat alternate requirement of the child nutrition programs."

2. Determine the ratio of vpp to liquid (allowed for full hydration) by using the following formula:

$$\text{a) } \frac{\% \text{ protein in vpp}}{18\% \text{ minimum protein}} = \frac{\text{total parts hydrated}}{\text{product}}$$

$$\frac{50}{18} = 2.7 \text{ total parts hydrated product}$$

$$\text{b) } \begin{array}{l} \text{Total parts} \\ \text{hydrated product} \end{array} \text{ minus } 1 \text{ part vpp} = \begin{array}{l} \text{Parts liquid} \\ \text{for full} \\ \text{hydration} \end{array}$$

$$2.7 - 1 = 1.7 \text{ parts liquid for full hydration}$$

3. Determine the total percentage of liquid allowed for full hydration:

$$\begin{array}{l} \% \text{ vpp} \times \text{parts liquid for} \\ \text{full hydration} \end{array} = \begin{array}{l} \text{total percentage liquid} \\ \text{allowed for hydration} \end{array}$$

$$8 \times 1.7 = 13.60\% \text{ liquid allowed for hydration}$$

4. Determine the total percentage of seafood mixture that can be credited by adding the following:

$$\% \text{ shrimp} + \% \text{ dry vpp} + \% \text{ allowable liquid} = \% \text{ raw} \\ \text{seafood} \\ \text{mixture}$$

$$52 + 8 + 13.6 = 73.60\% \text{ raw seafood mixture}$$

5. Check the percentage of fully hydrated vpp replacing the raw seafood in the seafood mixture (vpp replacement in excess of 30 percent will not be credited toward the meal pattern requirements):

$$\frac{\% \text{ vpp} + \% \text{ allowable liquid}}{\% \text{ seafood mixture}} \times 100 = \% \text{ hydrated vpp}$$

$$\frac{8 + 13.6}{73.6} \times 100 = 29.34\% \text{ hydrated vpp}$$

6. Multiply the raw portion size by the percent of raw seafood mixture:

$$\text{raw portion size} \times \% \text{ raw seafood mixture} = \text{oz raw seafood mixture/portion}$$

$$0.50 \times 0.736 = 0.368 \text{ oz raw seafood mixture/portion}$$

7. Multiply the ounces of raw seafood mixture per portion by the cooking yield for raw minced shrimp (58 percent yield):

$$\text{oz raw seafood mixture/portion} \times 0.58 = \text{oz equivalent meat/meat alternate/nugget}$$

$$0.368 \times 0.58 = 0.21344 \text{ oz equivalent meat/meat alternate/nugget}$$

8. Multiply the ounce equivalent meat/meat alternate by the nuggets per portion:

$$\text{oz equivalent meat/meat alternate} \times \text{nuggets/portion} = \text{oz equivalent meat/meat alternate}$$

$$0.21344 \times 6 \text{ nuggets} = 1.28064 \text{ oz equivalent meat/meat alternate}$$

Step 3.

Step 3 does not apply in this example.


Step 4.

Round down to the nearest 0.25 ounce equivalent meat/meat alternate. This product provides 1.25 ounce equivalent meat/meat alternate.

Sample CN statement

	CN	000003
CN	<p>Six Shrimp Nuggets with Vegetable Protein Product (0.50 oz each) provide 1.25 oz equivalent meat/meat alternate for Child Nutrition Meal Pattern Requirements. (Use of this logo and statement authorized by the Food and Nutrition Service, USDA 06-84.)</p>	CN
	CN	

Sample CN Label

<p>FISHWORLD</p> <p></p> <p>EST NO. 000</p> <p>FISH AND CHEESE PORTIONS</p>			<p>4 oz. COD</p> <p>Quick Frozen Pre Cooked</p>		
	CN	000008		CN	
CN	<p>Fishworld's 4.00 oz Fish and Cheese Portion [Containing 1.57 oz equivalent meat, .50 oz cheese and 1.48 oz batter and breading] provides 2.00 oz equivalent meat/meat alternate and 2.00 servings of bread alternate for Child Nutrition Meal Pattern Requirements. (Use of this logo and statement authorized by the Food and Nutrition Service, USDA 10-84.)</p>				CN
	CN			CN	
<p>INGREDIENTS:</p> <p>FISH: 50.5% Cod, DATTER: 23.7% Water, enriched Bleached wheat flour (niacin, reduced iron, thiamine mononitrate, riboflavin), yellow corn flour, modified food starch, whey, non-fat dry milk, salt, leavening, egg. BREADING: 13.3% Enriched wheat flour (niacin, reduced iron, thiamine mononitrate, riboflavin), yellow corn flour, sugar, whey, dextrose.</p> <p>CHEESE: 12.5% Pasteurized Processed American Cheese (American cheese, water, cream, sodium citrate, sodium phosphate, salt, sorbic acid).</p>					
<p>24 PORTIONS NET WEIGHT: 6 LBS.</p>					
<p>Distributed by Fishworld Incorporated, Jones, Massachusetts, 00000</p>					



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